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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/501,954

08/10/2004

Ville Ruutu

59643.00477

8677

32294

7590

03/05/2008

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EXAMINER

LIU, HARRY K

ART UNIT

PAPER NUMBER

3662

MAIL DATE

DELIVERY MODE

03/05/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/501,954	<b>Applicant(s)</b> RUUTU ET AL.	
	<b>Examiner</b> HARRY LIU	<b>Art Unit</b> 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

Receipt is acknowledged of applicant's amendment filed (12/31/2007). Claims (1-19) are pending and an action on the merits is as follows.

Applicant's arguments with respect to claims (1-19) have been considered but are moot in view of the new ground(s) of rejection.

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#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 11, 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloebaum (6204808).

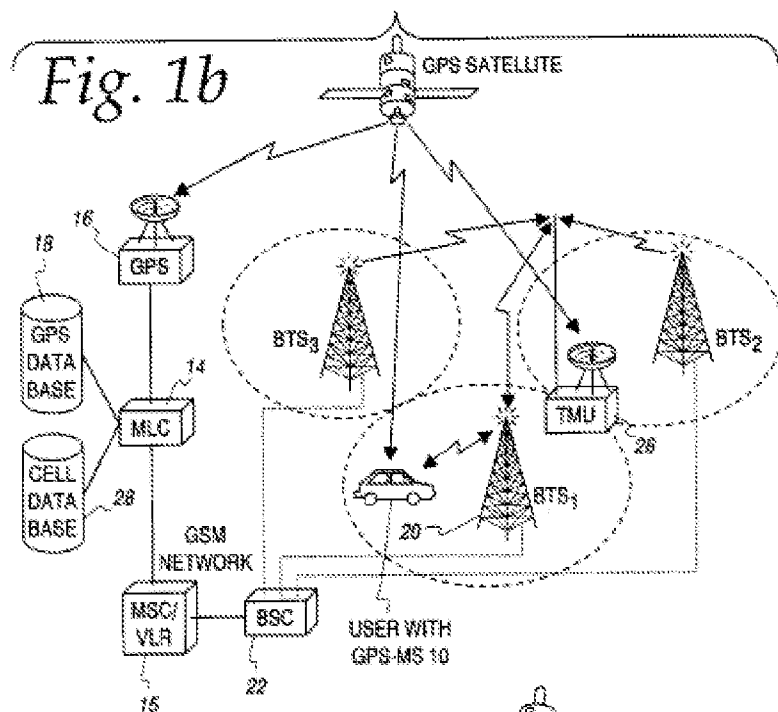
Regarding claims 1, 6-7, 16-19, Bloebaum discloses a system and method of using aiding/assistance information provided from cellular network in helping the acquisition and accuracy of position determination comprising:

- determining a likely location of mobile user equipment relative to a station and determining an estimate of a delay between transmission of signal from station to the mobile (round trip propagation delay, col. 10, lines 55-67);

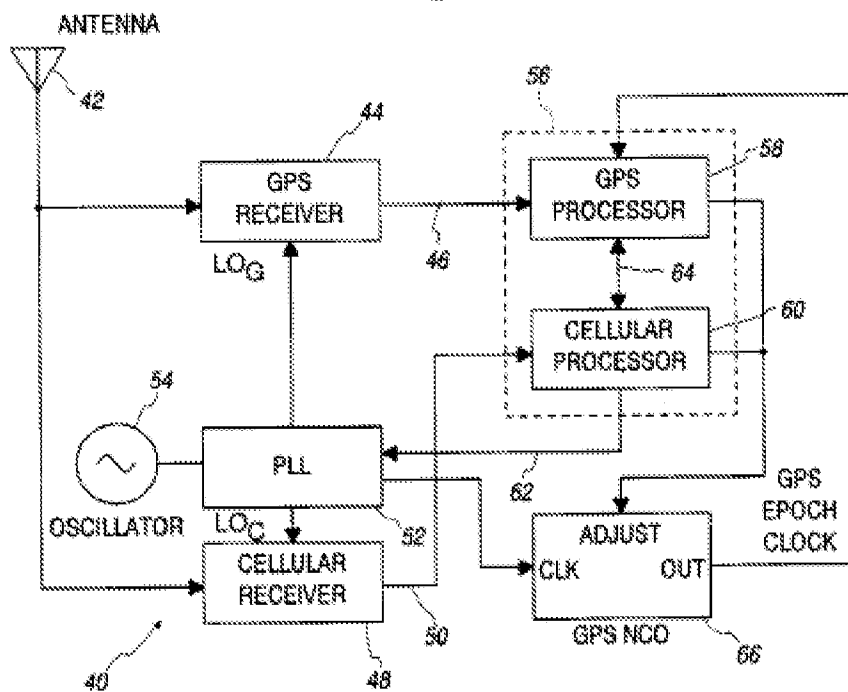
- signaling assistance data from the station to the mobile user equipment, said assistance data comprising information about the timing of a positioning system (see FIG. 3 below, MLC transmits assistance data through BTS1 to mobile);

- calculating a more accurate location determination at the user equipment based on signals from the entities of the positioning system, the assistance data and said estimated delay, wherein the location is determined based on information signaled from entities of a positioning system and assistance data signaled from the station of the communication system (combined satellite and range assistance information to provide excellent **timing**, col. 13, lines 36-67)(Summary of the Invention).

Bloebaum does not specifically disclose a location determination processor or a processor configured to provide an estimate of the delay. However, Bloebaum teaches receiving of satellite assistance information and use of GPS/cellular processor. It is known in the art that a GPS processor can benefit from more accurate ephemeris information provided and timing. It would have been obvious to modify the GPS processor by separating the processor to claimed device in order to better differentiate the function of processing unit.



*Fig. 5*



Regarding claims 2, 4-5, Bloebaum discloses information about the estimated delay is transmitted from the station to the mobile user equipment (from BTS1 to mobile, GPS satellite, see FIG 1b above) and the positioning system comprises satellite.

Regarding claim 3, Bloebaum discloses the estimate of the delay is determined at the mobile user equipment (round trip propagation delay, col. 10, lines 55-67).

Regarding claim 8, Bloebaum discloses the estimate of the delay estimate is included in the assistance data (see claim1).

Regarding claim 11, 14-15, Bloebaum discloses average timing advance or round trip time is used in estimation of said delay in transmission of signals from the station to the mobile user equipment (round trip propagation delay, col. 10, lines 55-67). The broadcast of cell information contains cell ID in its serving radius which is also used in estimating the likely location/distance.

3. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloebaum (6204808) in view of Zhao (6452541).

Regarding claims 9-10, Bloebaum fails to disclose the likely location of the user equipment is estimated based on information about the mass center of the coverage area of the station, use of information about a weighted mass centre. However, Zhao teaches the likely location estimated based on mass center (col. 2, lines 53-55 & col. 5, lines 5-8). It would have been obvious to modify Bloebaum by incorporating claimed features in order to expand the application more in case TA is not available.

4. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloebaum (6204808) in view of Moon (6405047).

Regarding claims 12-13, Bloebaum fails to disclose the likely location is determined based on information of the average location of the mobile user equipment. However, Moon teaches likely location determined based on information of the average location or signal strength measurement (col. 5, lines 1-6). It would have been obvious to modify Bloebaum by incorporating claimed features in order to better estimate the location while other help information is not available.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry Liu whose telephone number is 571-270-1338. The examiner can normally be reached on Monday -Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, please **leave a voice message** with application serial number and nature of call, a response within 24 hours can be expected during regular business days. Also, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-270-2338.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harry Liu/  
Examiner, Art Unit 3662

March 7, 2008

/Thomas H. Tarcza/  
Supervisory Patent Examiner, Art Unit 3662